I. Training

153. By no later than one hundred twenty (120) days from the Date of Entry of the Addendum, Premcor shall develop an annual (i.e., once each calendar year) training program for employees asked to draw benzene waste samples at the Premcor Refineries.

154. For the Premcor Refineries complying with a 2 Mg compliance option or the 6 BQ Compliance Option, by no later than one hundred eighty (180) days from the Date of Entry of the Addendum, Premcor shall complete the development of standard operating procedures for all control equipment used to comply with the Benzene Waste NESHAP. By no later than two hundred seventy (270) days thereafter, Premcor shall complete an initial training program regarding these procedures for all operators assigned to this equipment. Comparable training shall also be provided to any persons who subsequently become operators, prior to their assumption of this duty. Until termination of this Decree, "refresher" training in these procedures shall be performed on at least a three year cycle.

155. Reserved.

156. If Premcor converts the Port Arthur Refinery to the 6BQ Compliance Option, then the Port Arthur Refinery shall comply with the provisions of Paragraph 154 by June 30, 2008.

157. As part of Premcor's training programs, Premcor must require any contractor hired to perform all or part of the requirements of this Part X to properly train its employees to implement the relevant provisions of this Part X.

J. Waste/Slop/Off-Spec Oil Management

158. For each of the Premcor Refineries subject to this Addendum, Premcor shall develop, similar to those in Appendix G in the Consent Decree, a schematic reflecting the movements of waste/slop/off-spec oil streams within each Refinery and shall provide this schematic to EPA on or before the June 30, 2007. Premcor will then certify to the best of its knowledge following reasonable inquiry, that these schematics accurately: depict the waste management units (including sewers) located at the Premcor Refineries upon the date of submittal under this paragraph that handle, store and

transfer waste/slop/off-spec oil streams; identify the control status of each waste management unit; and show how such oil is transferred within each Refinery. To the extent that Premcor and EPA determine that any change to a Refinery subject to this Addendum necessitates a revision to a schematic, then Premcor shall update such schematic.

159. Organic Benzene Waste Streams. Upon completion of all corrective action identified in the plan submitted pursuant to Paragraph 134, or in accordance with any compliance strategy approved by EPA pursuant to Paragraph 135, Premcor shall ensure that all waste management units handling "organic" benzene wastes, as defined in Subpart FF, shall meet any control standards applicable to such units under Subpart FF.

160. Aqueous Benzene Waste Streams. Except as otherwise provided by Subpart FF, for purposes of calculating the TAB at each of the Premcor Refineries pursuant to the requirements of 40 C.F.R. § 61.342(a), Premcor shall include all waste/slop/off-spec oil streams that become "aqueous" until such streams are recycled to a process or put into a process feed tank (unless the tank is used primarily for the storage of wastes). For purposes of complying with a 2 Mg or 6 BQ compliance option, to the extent required by Subpart FF, all waste management units handling aqueous benzene waste streams shall either meet the applicable control standards of Subpart FF or shall have their uncontrolled benzene quantity count toward the applicable 2 or 6 megagram limit.

161. Recordkeeping. For each of the Premcor Refineries, Premcor shall maintain records quantifying waste/slop/off-spec oil movements for all benzene waste streams.

162. Disputes under this Section X.J shall be resolved in accordance with the dispute resolution provisions of this Addendum.

K. End of Line Sampling

163. The provisions of this Section X.K shall apply to the Premcor Refineries from the Date of Entry through termination of this Part.

164. Valero developed and EPA approved representative end-of-line sampling ("EOL") plans, within Appendix G of the Consent Decree, designed to determine the benzene quantity in uncontrolled waste streams, including sampling locations and methods for flow calculations to be used in quarterly EOL benzene determinations. By June 30, 2007, Premcor shall develop and submit to EPA EOL Plans similar to the EOL plans submitted pursuant to the Consent Decree. EPA shall approve the EOL Plan for each Premcor Refinery provided such plans are consistent with the representative EOL Plans in Appendix G to the Consent Decree.

165. Commencing with the third calendar quarter 2007, Premcor shall conduct quarterly EOL sampling for benzene quantities in uncontrolled waste streams at the Premcor Refineries according to each proposed and/or approved EOL Plan.

166. Once an EOL Plan is approved by EPA, if changes in processes, operations, or other factors cause the approved sampling locations and approved methods for determining flow calculations to no longer provide an accurate measure of a Refinery's EOL benzene quantity, Premcor shall submit a revised EOL Plan to EPA for approval. Any changes to a EOL Plan made by Premcor prior to EPA approval of the original Plan shall be submitted as a revised proposed Plan and may be implemented thereafter.

167. Premcor shall use all sampling results and approved flow calculation methods under the approved sampling plans referenced in Paragraph 164 to calculate a quarterly and estimate a calendar year value for each of the Premcor Refineries. If the quarterly calculation for a refinery made pursuant to this paragraph exceeds (a) 2.5 Mg for a refinery with TAB historically less than 10 Mg/yr, (b) 0.5 Mg for a refinery complying with a 2 Mg compliance option, or (c) 1.5 Mg for a refinery complying with the 6 BQ Compliance Option, but Premcor estimates that the annual benzene quantity for such refinery will remain below the referenced annual quantity, then Premcor shall include within its next report under Paragraphs 176 or 178 comments justifying why, notwithstanding the quarterly

calculation, Premcor estimates that the annual benzene quantity will not exceed the applicable level listed above.

168. If any estimated annual benzene calculation for any facility made pursuant to the proceeding paragraph exceeds (a) 2 Mg for a refinery complying with a 2 Mg compliance option, or (b) 6 Mg for a refinery complying with the 6 BQ Compliance Option, then Premcor shall prepare for each such refinery a written summary and schedule of the activities planned to minimize benzene waste at such refinery to ensure that it complies with the Benzene Waste Operations NESHAP. (The estimated annual values in and of themselves, are not the basis for penalties and are not deemed to be instances of non-compliance for purpose of this Addendum.) The summary and schedule are due no later than sixty (60) days after the close of the quarter in which the estimated annual value exceeds the applicable quantity (the "TAB Study and Compliance Review").

169. Reserved.

170. Premcor shall maintain records supporting its quarterly calculations of EOL quantities, including the methodology and data used to identify and calculate flow until termination of the obligations of this Part.

L. Miscellaneous Measures

171. For the Premcor Refineries that have a TAB greater than 10 Mg/yr, Premcor shall manage all groundwater remediation conveyance systems in accordance with, and to the extent required by, the Benzene Waste NESHAP, 40 C.F.R. § 61.342. In accordance with 40 C.F.R. § 61.342, Premcor may exclude from the calculation of a Refinery's TAB the benzene concentration in any waste generated by remediation activities conducted at such Refinery.

172. From the first calendar quarter commencing after the Date of Entry through termination of the Addendum, each Premcor Refinery subject to this Addendum shall:

a. Conduct monthly visual inspections of all water traps within the Refinery's individual drain systems that are controlled under the Benzene Waste NESHAP;

b. Identify and mark all area drains that are segregated stormwater drains;

c. Where installed pursuant to Subpart FF, visually monitor all conservation vents or indicators on process sewers for detectable leaks on a weekly basis and reset any vents where leaks are detected. After two (2) years of weekly inspections, and based upon an evaluation of the recorded results, Premcor may submit a request to the appropriate EPA Region to modify the frequency of the inspections. EPA shall not unreasonably withhold its consent. Nothing in this subparagraph shall require Premcor to monitor conservation vents on fixed roof tanks; and

d. Conduct quarterly monitoring, in accordance with the "no detectable emissions" provision in 40 C.F.R. § 61.347, of oil-water separators controlled in accordance with 40 C.F.R. § 61.347.

173. Reserved.

174. Notwithstanding any other provision in this Addendum or its required sampling, Premcor shall account for and include in the TAB all slop oil recovered from its oil/water separators or sewer systems until recycled or put into a feed tank in accordance with, and only to the extent required by 40 C.F.R. § 61.342(a). In no event shall the benzene content in slop oil be counted more than once towards a facility's TAB calculation.

M. Recordkeeping and Reporting Requirements for this Part

175. In addition to the Reports Required under 40 C.F.R. § 61.357. At the times specified in the applicable provisions of this part, Premcor shall submit for the Premcor Refineries the following reports to EPA, to the applicable EPA Region, and to the applicable Plaintiff-Intervener:

a. BWN Compliance Review and Verification Report (¶129), as amended, if necessary (¶131);

b. Amended TAB Report, if necessary (¶132);

c. Plan(s) to comply with Subpart FF, if any BWN Compliance Review and Verification Reports, indicate non-compliance (¶134);

d. Report concerning carbon canister systems (¶140); and

e. TAB Study and Compliance Review, if necessary (¶168).

176. In Conjunction with the Reports Required under 40 C.F.R. § 61.357 For each Refinery for which Premcor is required, pursuant to 40 C.F.R. §§ 61.357(d)(6) and (7), to submit quarterly reports ("Section 61.357 Reports"), Premcor shall include the following additional information in the subject Section 61.357 Reports for such Refinery:

i. Laboratory Audits. Once laboratory audits are required to have been conducted pursuant to the provisions of Section X.G., Premcor shall identify, in each Section 61.357 Report submitted thereafter until termination of this Addendum, all laboratory audits completed for such Refinery pursuant to the provisions of Section X.G during the calendar quarter for which the quarterly report is due. Premcor shall include the identification of each laboratory audited, a description of the methods used in the audit, and a summary of the results of the audit.

ii. Training. Once Premcor is required to have conducted training at its Refinery pursuant to Section X.I., Premcor shall describe, in each Section 61.357 Report submitted thereafter until termination of this Addendum, the measures that it took to comply with the training provisions of Section X.I for such Refinery, starting from the Date of Entry of the Addendum;

iii. EOL Sampling Results. Once EOL sampling is required under Section X.K, Premcor shall report the results of the quarterly EOL sampling undertaken at such Refinery pursuant to Section X.K for the calendar quarter. The report shall include a list of all waste streams sampled at such Refinery, the results of the benzene analysis for each sample, the computation of the EOL benzene quantity for the quarter and any other related information required by any plan approved for such Refinery pursuant to Paragraph 164.

177. Reserved.

178. For each Refinery for which Premcor determines a TAB level of less than 10 mg/yr (and for which Premcor is not required to submit a Section 61.357 Report), Premcor shall submit a progress report as part of the report required by Part XVI. For each semi-annual period, Premcor shall submit for such Refinery the information described in Paragraphs 176(i)-(ii), and the following information:

i. The results of the quarterly EOL sampling undertaken pursuant to Paragraphs 164 - 167.

ii. A list of all waste streams sampled, the results of the benzene analysis for each sample, and the computation of the EOL benzene quantity for the respective quarters.

iii. An identification, for each Refinery, of whether the quarterly benzene quantity equals or exceeds 2.5 Mg/yr and whether the projected calendar year benzene quantity equals or exceeds 10 Mg/yr. If either condition is met, Premcor shall include in the Progress Report a plan or determination, if required pursuant to Paragraphs 167 and 168.

179. – 180. Reserved.

N. Agencies to Receive Reports, Plans and Certifications Required in the paragraph; Number of Copies

181. Unless otherwise specified in this Part, Premcor shall submit all reports, plans and certifications required to be submitted under this Part X to EPA, the appropriate EPA Region and the applicable Plaintiff-Intervener. For each submission, Premcor shall submit two copies to EPA, two copies to the appropriate EPA Region and two copies to the appropriate Plaintiff-Intervener. By agreement between Premcor and each of the offices that are to receive the materials in this Part X, Premcor may submit the materials electronically.

XI. LEAK DETECTION AND REPAIR ("LDAR") PROGRAM ENHANCEMENTS

Program Summary: Premcor shall undertake at each Premcor Refinery the following measures to enhance each Refinery's LDAR program and minimize or eliminate fugitive emissions from valves and pumps in light liquid and/or in gas/vapor service.

A. Introduction

182. In order to minimize or eliminate fugitive emissions of volatile organic compounds ("VOCs"), benzene, volatile hazardous air pollutants ("VHAPs"), and organic hazardous air pollutants ("HAPs") from valves and pumps in light liquid and/or in gas/vapor service, Premcor shall undertake at each of the Premcor Refineries the enhancements of this Part XI to each Refinery's LDAR program under Title 40 of the Code of Federal Regulations, Part 60, Subparts VV and GGG; Part 61, Subparts J and V; Part 63, Subparts F, H, and CC; and applicable state and local LDAR requirements that are federally enforceable or implemented by participating Plaintiff-Interveners (collectively, the "LDAR Regulations"). The terms "in light liquid service" and "in gas/vapor service" shall have the definitions set forth in the applicable provisions of the LDAR Regulations.

183. Reserved.

184. For purposes of this Part XI, "Equipment" shall mean pumps and valves in light liquid or gaseous service at the refineries subject to this Addendum, except for those pumps and valves exempt from standard monitoring frequencies under applicable LDAR Regulations.

B. Written Refinery-Wide LDAR Program

185. By no later than June 30, 2007, Premcor shall develop and maintain, for each Premcor Refinery, a written, Refinery-wide program for compliance by such Refinery with applicable LDAR Regulations. Until termination of this Decree, Premcor shall implement these programs at each Premcor Refinery on a Refinery-wide basis, and shall update each refinery's program as necessary to ensure continuing compliance. Each Refinery-wide program shall include:

1. An overall, Refinery-wide leak rate goal that will be a target for achievement on a process-unit-by-process-unit basis. For purposes of this provision, the overall

Refinery-wide leak rate goal shall constitute a tool for implementation of the Refinery-wide program, but shall not be enforceable or subject to stipulated penalties under Part XX;

2. Identification of all Equipment that has the potential to leak VOCs, HAPs, VHAPs, and benzene within process units that are owned and maintained by each Refinery;

3. Procedures for identifying leaking Equipment within process units that are owned and maintained by each Refinery;

4. Procedures for repairing and keeping track of leaking Equipment;

5. Procedures for identifying and including in the LDAR program new Equipment; and

6. A process for evaluating new and replacement Equipment to promote consideration and installation of equipment that will minimize leaks and/or eliminate chronic leakers.

C. Training

186. By no later than June 30, 2007, Premcor shall implement the following training programs at each of the Refineries:

1. For personnel newly-assigned to LDAR responsibilities, require LDAR training prior to each employee beginning such work;

2. For all personnel with assigned LDAR responsibilities, provide and require completion of annual LDAR training; and

3. For all other Refinery operations and maintenance personnel (including contract personnel), provide and commence implementation of an initial training program, with completion within six (6) months thereafter, that includes

instruction on aspects of LDAR if and to the extent that aspects of LDAR are relevant to the person's duties.

4. Until termination of this Decree, perform "refresher" training in LDAR on a three year cycle.

D. LDAR Audits

187. Premcor shall undertake at each of the Premcor Refineries the Refinery-wide audits set forth in Paragraphs 188 and 189, to help ensure each Refinery's compliance with all applicable LDAR requirements. Premcor's LDAR audits shall include comparative monitoring of valves and pumps, records review to ensure monitoring and repairs for valves and pumps were completed as required, tagging review, data management review, and observation of the LDAR technicians' calibration and monitoring techniques.

188. Third-Party Audits. Premcor shall conduct a third-party audit of each Refinery's LDAR program at least once every four years. For purposes of this requirement, "third party" may include a qualified contractor, consultant, industry group, or trade association. The first third-party audit shall be completed no later than one year from the Date of Entry of the Addendum. During the period between the Date of Entry and the date of the first audit for each refinery under this Section, Premcor shall make reasonable efforts to ensure compliance with the requirements of this Addendum and all applicable LDAR regulations.

189. Internal Audits. Premcor shall conduct internal audits of each of the Premcor Refineries' LDAR programs by sending Premcor or Valero personnel familiar with the LDAR program and its requirements to audit a Premcor Refinery. Premcor shall complete the first round of these internal LDAR audits by no later than two years from the date of completion of the first round of third-party audits required in Paragraph 188. Internal audits of each Refinery shall be held every four years thereafter for the life of this Addendum.

190. Frequency. To ensure that an audit at each Refinery subject to this Addendum occurs every two years, third-party and internal audits shall be separated by approximately two years after the initial Third Party Audit.

191. Alternative. As an alternative to the internal audits required by Paragraph 189, Premcor may elect to retain third-parties to undertake one or more of these audits, provided that an audit of each Refinery occurs every two (2) years.

E. Implementation of Actions Necessary to Correct Non-Compliance

192. If the results of any of the audits conducted pursuant to Section XI.D at any of the Premcor Refineries identify any areas of non-compliance with the LDAR Regulations, Premcor shall implement, as soon as practicable, all appropriate steps necessary to correct the area(s) of non-compliance, and to prevent, to the extent practicable, a recurrence of the cause(s) of the non-compliance. In the Semiannual LDAR Report submitted pursuant to the provisions of Section XI.R covering the period when an audit was conducted, Premcor shall certify to EPA that the audit has been completed and that the refinery is in compliance or on a compliance schedule.

F. Retention of Audit Reports

193. Until termination of the Addendum, Premcor shall retain the audit reports generated pursuant to Section XI.D and shall maintain a written record of the corrective actions taken at each of its Refineries in response to any deficiencies identified in any audits. In the Semiannual LDAR Report submitted pursuant to the provisions of Section XI.R covering the period when an audit was conducted pursuant to Section XI.D, Premcor shall submit the audit reports and corrective action records for audits performed and actions taken during the previous semiannual period.

G. Internal Leak Definition for Valves and Pumps

194. Premcor shall utilize the following internal leak definitions for Equipment covered by an applicable LDAR program at the Premcor Refineries, unless a lower leak definition is established for the relevant Refinery under applicable permit(s) or applicable state LDAR Regulations.

195. Leak Definition for Valves. Two years from the Date of Entry, Premcor shall utilize an internal leak definition of 500 ppm VOCs for refinery valves qualifying as Equipment at the Lima and Memphis Refineries. At the Date of Entry of the Addendum, the Port Arthur Refinery shall utilize an internal leak definition of 500 ppm VOCs for refinery valves qualifying as Equipment.

196. Leak Definition for Pumps. Two years from the Date of Entry, Premcor shall utilize an internal leak definition of 2000 ppm for refinery pumps qualifying as Equipment at the Memphis and

Lima Refineries. At the Date of Entry, the Port Arthur Refinery shall utilize an internal leak definition of 2000 ppm for refinery pumps qualifying as Equipment.

H. Reporting, Recording, Tracking, Repairing and Remonitoring Leaks of Valves and Pumps Based on the Internal Leak Definitions

197. Reporting. For regulatory reporting purposes, Premcor may continue to report leak rates in valves and pumps against the applicable regulatory leak definition, or may use the lower, internal leak definitions specified in Paragraphs 195 and/or 196.

198. Recording, Tracking, Repairing and Remonitoring Leaks. Premcor shall record, track, repair and remonitor all leaks in excess of the internal leak definitions of Paragraphs 195 and 196 (at such time as those definitions become applicable) in accordance with applicable provisions of the LDAR Regulations, except that Premcor shall have five (5) days to make an initial attempt at repair and thirty (30) days either to make final repairs and remonitor leaks that are greater than the internal leak definitions but less than the applicable regulatory leak definitions or to place the valve on the delay of repair list according to Section XI.Q.

I. Initial Attempt at Repair on Valves

199. Beginning no later than ninety (90) days after the Date of Entry of this Addendum, Premcor shall make an "initial attempt" at repair on any valve qualifying as Equipment under Paragraph 184 that has a reading greater than 200 ppm of VOCs, for the life of the Addendum, excluding control valves, orbit valves and other valves that LDAR personnel are not authorized to repair. Premcor or its designated contractor, as applicable, shall make this "initial attempt" and remonitor such valves within five (5) calendar days of identification. Unless the remonitored leak rate is greater than the applicable leak definition, no further action will be necessary.

J. LDAR Monitoring Frequency

200. Pumps. When the lower leak definition for pumps becomes applicable pursuant to Paragraph 196, Premcor shall monitor pumps qualifying as Equipment at the lower leak definition on a monthly basis.

201. Valves. When the lower leak definition for valves becomes applicable pursuant to Paragraph 195, Premcor shall monitor valves qualifying as Equipment in accordance with one of the following options on a process unit-by-process unit basis:

a. Quarterly monitoring with no ability to skip periods. This option cannot be chosen for process units subject to the HON or the modified-HON option in the Refinery MACT; or

b. Sustainable skip period program (see attached Appendix I). Previous process unit monitoring results may be used to determine the initial skip period interval provided that each valve has been monitored using the 500 ppm leak definition. Process units monitored in the skip period alternative method may not revert to quarterly monitoring if the most recent monitoring period demonstrates that more than two percent of the valves were found leaking under the internal leak definition.

202. Reserved.

203. For process units complying with the sustainable skip period program set forth in Paragraph 201(b), EPA or the relevant state Intervener agency may require Premcor to implement more frequent monitoring of valves qualifying as Equipment, in accordance with the monitoring frequencies specified in the skip period provisions identified in Appendix I, if the leak rate determined during an EPA or relevant Plaintiff-Intervener inspection demonstrates that more frequent monitoring is appropriate. In evaluating whether the leak rate demonstrates that more frequent monitoring of valves is appropriate, EPA or the relevant Plaintiff-Intervener, as applicable, will determine the leak rate utilizing data generated in accordance with 40 C.F.R. Part 60, EPA Reference Test Method 21, and based on the total number of valves in the process unit, rather than the total number of valves monitored during the inspection.

204. Premcor shall have the option of monitoring affected valves and pumps within process units after completing a documented maintenance, startup or shutdown activity without having the

results of the monitoring count as a scheduled monitoring activity, provided that Premcor monitors according to the following schedule:

a. Event involving 1,000 or fewer affected valves and pumps – monitor within one (1) week of the documented maintenance, startup or shutdown activity;

b. Event involving greater than 1,000 but fewer than 5,000 affected valves and pumps – monitor within two (2) weeks of the documented maintenance, startup or shutdown activity; and

c. Event involving greater than 5,000 affected valves and pumps – monitor within four (4) weeks of the documented maintenance, startup or shutdown activity.

K. Electronic Monitoring, Storing, and Reporting of LDAR Data

205. Electronic Storing and Reporting of LDAR Data. For each of the Premcor Refineries, Premcor has and will continue to maintain an electronic database for storing and reporting LDAR data.

206. Electronic Data Collection During LDAR Monitoring. By no later than June 30, 2007, Premcor shall use dataloggers and/or electronic data collection devices during all LDAR monitoring required by this decree. Premcor, or its third party contractor(s), shall use its best efforts to transfer, on a daily basis, electronic data from electronic datalogging devices to the electronic database required pursuant to Paragraph 205. For all monitoring events in which an electronic data collection device is used, the collected monitoring data shall include a time and date stamp, operator identification, and instrument identification. Premcor may use paper logs where necessary or more feasible (e.g., small rounds, remonitoring, or when dataloggers are not available or broken), and shall record the identification of the technician undertaking the monitoring, the date, time, and the identification of the monitoring equipment. Premcor shall transfer any manually recorded monitoring data to the electronic database within seven (7) days of monitoring.

L. QA/QC of LDAR Data

207. By no later than ninety (90) days after the Date of Entry of this Addendum, Premcor or its third party contractor(s) shall develop and implement a procedure to ensure a quality assurance/quality control ("QA/QC") review of all data generated by LDAR monitoring technicians. This QA/QC procedure shall include procedures for:

1. Monitoring technician(s) reviewing the monitoring data daily;
2. Quarterly performing a QA/QC review of Premcor's and any third party contractor's monitoring data which shall include, but not be limited to: number of components monitored per technician, time between monitoring events, and abnormal data patterns.

M. LDAR Personnel

208. By no later than the Date of Entry of the Addendum, Premcor shall establish a program for the Premcor Refineries that will hold LDAR personnel accountable for LDAR performance at each Refinery. Premcor shall maintain a position within each Refinery with responsibility for LDAR management and with the authority to implement improvements.

N. Adding New Valves and Pumps

209. By no later than one (1) year from the Date of Entry, Premcor shall establish a tracking program for maintenance records (e.g., a Management of Change program) to ensure that valves and pumps qualifying as Equipment added to each Refinery during maintenance and construction are integrated into the LDAR program.

O. Calibration/Calibration Drift Assessment

210. Calibration. Premcor shall conduct all calibrations of LDAR monitoring equipment using methane as the calibration gas, in accordance with 40 C.F.R. Part 60, EPA Reference Test Method 21.

211. Calibration Drift Assessment. Beginning no later than sixty (60) days from the Date of Entry of this Addendum, Premcor shall conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum. Premcor shall conduct the calibration drift assessment using, at a minimum, a 500 ppm calibration gas. If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, Premcor shall remonitor all valves at such Refinery qualifying as Equipment that were monitored since the last calibration and that had a reading greater than 100 ppm and all pumps at such Refinery qualifying as Equipment that were monitored since the last calibration and that had a reading greater than 500 ppm.

P. Chronic Leakers

212. Premcor shall replace, repack, or perform similarly effective repairs on chronically leaking, non-control valves during the next process unit turnaround after identification. A component shall be classified as a "chronic leaker" under this paragraph if it leaks above 10,000 ppm twice in any consecutive four quarters, unless the component had not leaked in the twelve (12) consecutive quarters immediately prior to the relevant process unit turnaround.

Q. Delay of Repair

213. Beginning no later than sixty (60) days from the Date of Entry of the Addendum, for any valves or pumps qualifying as Equipment for which Premcor is allowed under the applicable LDAR Regulations to place on the "delay of repair" list, Premcor shall satisfy the following requirements. Nothing in this provision is intended to limit Premcor's ability to isolate a valve or pump rather than placing it on the "delay of repair" list, to the extent authorized under applicable LDAR Regulations.

a. For all valves or pumps:

1. Require sign-off by the unit supervisor that the valve or pump is technically infeasible to repair without a process unit shutdown, to the

extent that the valve or pump is being placed on the "delay of repair" list for that reason; and

2. Include valves and pumps that are placed on the "delay of repair" list in regular LDAR monitoring.

b. For valves: For valves, other than control valves, qualifying as Equipment leaking at a rate of 10,000 ppm or greater, require use of a "drill and tap" or equivalent method for fixing such leaking valves, rather than placing the valve on the "delay of repair" list, unless Premcor can demonstrate that there is a safety, mechanical, or adverse environmental concern posed by attempting to repair the leak in this manner. Premcor shall perform the first "drill and tap" (or equivalent repair method) within fifteen (15) days, and a second attempt (if necessary) within thirty (30) days after the leak is detected. After two unsuccessful attempts to repair a leaking valve through the drill and tap method, Premcor may place the leaking valve on its "delay of repair" list. If a new method develops for repairing such valves, Premcor will advise EPA prior to implementing the use of such new method in place of drill and tap for repairs required under this Addendum.

R. Recordkeeping and Reporting Requirements for this Part

214. In addition to the Reports Required under 40 C.F.R. § 60.487 and § 63.654.

a. Written Refinery-Wide LDAR Program. No later than July 31, 2007, Premcor shall submit a copy of each of the Premcor Refineries' Written Refinery-Wide LDAR Programs developed pursuant to Paragraph 185 to EPA, the appropriate EPA Region, and the appropriate Plaintiff-Intervener agency.

b. Certification of Use of Electronic Data Collection during LDAR Monitoring. No later than July 31, 2007, Premcor shall certify that it utilizes at all of the Premcor Refineries

electronic data collection devices during LDAR monitoring, pursuant to the requirements of Paragraph 206.

215. As part of the Reports Required under 40 C.F.R. § 60.487 and § 63.654 (Semi-Annual LDAR Report) Premcor shall submit, for the Premcor Refineries, the following information, at the following times:

a. First Semiannual LDAR Report Due under the Addendum. Premcor shall include the following as part of its report(s), as applicable:

i. A certification of the implementation of the "initial attempt at repair" program of Paragraph 199;

ii. A certification of the implementation of QA/QC procedures for review of data generated by LDAR technicians as required by Paragraph 207;

iii. An identification of the individual, by name or title, at each Refinery responsible for LDAR performance as required by Paragraph 208;

iv. A certification of the development of a tracking program for new valves and pumps added during maintenance and construction (Management of Change Program) as required by Paragraph 209;

v. A certification of the implementation of the calibration and calibration drift assessment procedures of Paragraphs 210 and 211;

vi. A certification of the implementation of the "chronic leaker" and "delay of repair" procedures of Paragraphs 212 and 213; and

vii. A copy of each refinery's written refinery-wide LDAR program under Paragraph 185.

b. Until termination of this Part XI of the Addendum, Premcor shall include the following information in the Semiannual LDAR Reports:

i. An identification of each audit, if any, that was conducted pursuant to the requirements of Section XI.D. in the previous semiannual period at each of the Premcor Refineries. For each audit identified, the report shall include an identification of the auditors, a summary of the audit results, and a summary of the actions that Premcor took or intends to take to correct all deficiencies identified in the audits.

ii. Training. Information identifying the measures taken to comply with the provisions of Paragraph 186; and

iii. Monitoring. The following information on LDAR monitoring:

(a) a list of the process units monitored during the reporting period;

(b) the number of valves and pumps present in each monitored process unit;

(c) the number of valves and pumps monitored in each process unit;

(d) the number of valves and pumps found leaking;

(e) the number of "difficult to monitor" pieces of equipment monitored;

(f) the projected month of the next monitoring event for that unit;

(g) a list of all pumps and valves currently on the "delay of repair" list, the date each component was placed on the list, the date each such component was determined to be leaking at a rate greater than 10,000 ppm, the date each drill and tap or equivalent method of repair, its associated monitoring results and whether such activities were completed in a timely manner under Paragraph 213;

(h) a list of all initial attempts/remonitoring that did not occur in a timely manner under Paragraph 199;

(i) the number of missed or untimely repairs under Paragraph 198; and

(j) the number of missed or untimely repairs under Paragraphs 212 and 213.

S. Agencies to Receive Reports, Plans and Certification Required in this Part XI: Number of Copies

216. Reserved.

217. Unless otherwise specified in this Part XI, Premcor shall submit all reports, plans and certifications required to be submitted under this Part XI to EPA and to the appropriate EPA Region and Plaintiff-Intervener. For each submission, Premcor shall submit one copy to EPA, two copies to the appropriate EPA Region and two copies to the appropriate Plaintiff-Intervener. By agreement between Premcor and each of the offices that are to receive the materials in this Part XI, Premcor may submit the materials electronically.

T. Excluded Equipment.

218. Notwithstanding anything to the contrary in this Part XI, the LDAR program shall not apply to valves and pumps exempt under the LDAR Regulations, including but not limited to: pressure relief devices, valves on closed vent systems, valves in vacuum service, leakless valves, and pumps with no mechanism to leak (e.g. canned and mag pumps). In addition, nothing in this Addendum is intended to require Premcor to monitor difficult-to-monitor valves or unsafe-to-monitor valves more frequently than is otherwise required under the LDAR Regulations.

U. New Monitoring Technologies.

219. In the event that EPA adopts new monitoring technologies (such as infrared imaging) into its LDAR regulations in the future, Premcor may request a modification to this Part XI to take advantage of such new regulations. EPA, after an opportunity for consultation with appropriate

Plaintiff-Interveners, may approve a change to part or all of this Part XI to take advantage of the new leak detection technology. Such a revised protocol must be developed and mutually agreed upon in writing by EPA and Premcor in accordance with Paragraph 381 [Modification].

XII. PROGRAM ENHANCEMENTS RE: NSPS SUBPARTS A AND J SO_2 EMISSIONS FROM CLAUS SULFUR RECOVERY PLANTS ("SRP") AND FLARING

Program Summary: Beginning immediately upon the lodging of this Addendum, Premcor agrees to take the following measures at all of its SRPs and certain flaring devices at the Premcor Refineries. Premcor will install additional equipment at certain refineries to achieve additional SO_2 emission reductions and further reduce flaring incidents. Premcor will implement procedures for root cause analysis of acid gas and hydrocarbon flaring incidents and tail gas incidents at all refineries.

A. DEFINITIONS

220. Unless otherwise expressly provided herein, terms used in this Part shall be interpreted as defined in the Clean Air Act, 42 U.S.C. § 7401 et seq., and the applicable regulations promulgated thereunder. In addition, the following definitions shall apply, for purposes of this Addendum, to the terms contained within this Part of this Addendum:

(1) "Acid Gas" (AG) shall mean any gas that contains hydrogen sulfide and is generated at a refinery by the regeneration of an amine scrubber solution;

(2) "AG Flaring" shall mean, for purposes of this Addendum, the combustion of Acid Gas and/or Sour Water Stripper Gas in an AG Flaring Device. Nothing in this definition shall be construed to modify, limit, or affect EPA's authority to regulate the flaring of gases that do not fall within the definitions contained in this Addendum of Acid Gas or Sour Water Stripper Gas.

(3) "AG Flaring Device" shall mean any device at a refinery that is used for the purpose of combusting Acid Gas and/or Sour Water Stripper Gas, except facilities in which gases are combusted to produce elemental sulfur, sulfuric acid or ammonium thiosulfate. The combustion of Acid Gas and/or Sour Water Stripper Gas occurs in AG Flaring Devices identified in Appendix K. To the extent that the refinery utilizes AG Flaring Devices

other than those identified in Appendix K for purposes of combusting Acid Gas and/or Sour Water Stripper Gas, those Flaring Devices shall be considered AG Flaring Devices under this Addendum.

(4) "AG Flaring Incident" shall mean the continuous or intermittent flaring/combustion of Acid Gas and/or Sour Water Stripper Gas in an AG Flaring Device that results in the emission of sulfur dioxide equal to, or greater than five hundred (500) pounds in a twenty-four (24) hour period; provided, however, that if five hundred (500) pounds or more of sulfur dioxide have been emitted in a twenty-four (24) hour period and flaring continues into subsequent, contiguous, non-overlapping twenty-four (24) hour period(s), each period of which results in emissions equal to, or in excess of five hundred (500) pounds of sulfur dioxide, then only one AG Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of flaring within the AG Flaring Incident.

(5) "Day" shall mean a calendar day.

(6) "Hydrocarbon Flaring" shall mean, for purposes of this Addendum, the flaring of refinery hydrocarbon process gases, except for Acid Gas and/or Sour Water Stripper Gas and/or Tail Gas, in a Hydrocarbon Flaring Device. Nothing in this definition shall be construed to modify, limit, or affect EPA's authority to regulate the flaring of gases that do not fall within the definitions contained in this Addendum.

(7) "Hydrocarbon Flaring Device" shall mean a flare device listed in Appendix N. Premcor shall provide notice to EPA, within the next report to be submitted pursuant to Part XVI, of any new Hydrocarbon Flaring Device which is installed at a Premcor Refinery subsequent to the Date of Entry of this Addendum. To the extent that a Premcor Refinery utilizes a Hydrocarbon Flaring Device other than those specified in Appendix N for the purposes of combusting any excess of a refinery-generated gas other than

Acid Gas and/or Sour Water Stripper Gas, such Hydrocarbon Flaring Device shall be covered under this Addendum.

(8) "Hydrocarbon Flaring Incident" or HC Flaring Incident, shall mean continuous or intermittent Hydrocarbon Flaring, at a Hydrocarbon Flaring Device that results in the emission of sulfur dioxide equal to, or greater than five hundred (500) pounds in a 24-hour period; provided, however, that if five hundred (500) pounds or more of sulfur dioxide have been emitted in a twenty-four (24) hour period and flaring continues into subsequent, contiguous, non-overlapping twenty-four (24) hour period(s), each period of which results in emissions equal to, or in excess of five-hundred (500) pounds of sulfur dioxide, then only one HC Flaring Incident shall have occurred. Subsequent, contiguous, non-overlapping periods are measured from the initial commencement of Flaring within the HC Flaring Incident.

(9) "Malfunction" shall mean any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(10) "Root Cause" shall mean the primary cause or causes of a AG or HC Flaring Incident or of a Tail Gas Incident as determined through a process of investigation.

(11) "Scheduled Maintenance" of an SRP shall mean any shutdown of an SRP that Premcor schedules at least fourteen (14) days in advance of the shutdown for the purpose of undertaking maintenance of that SRP.

(12) "Shutdown" shall mean the cessation of operation of an affected facility for any purpose.

(13) "Sour Water Stripper Gas" or "SWS Gas" shall mean the gas produced by the process of stripping or scrubbing refinery sour water.

(14) "Startup" shall mean the setting in operation of an affected facility for any purpose.

(15) "Sulfur Recovery Plant" or "SRP" shall mean a process unit that recovers sulfur from hydrogen sulfide by a vapor phase catalytic reaction of sulfur dioxide and hydrogen sulfide.

(16) "Tail Gas" shall mean exhaust gas from the Claus trains and the tail gas treating unit ("TGTU") section of the SRP.

(17) "Tail Gas Incident" shall mean the combustion of Tail Gas that:

a. is combusted in a flare that results in five hundred (500) pounds of sulfur dioxide emissions in a twenty-four (24) hour period; or

b. is combusted in a thermal incinerator and results in excess emissions of 500 pounds or more of SO_2 in any 24-hour period. Only those time periods which are in excess of a SO_2 concentration of 250 ppm (rolling 12-hour average) shall be used to determine the amount of excess SO_2 emissions from the incinerator; provided, however, that during periods of maintenance of a monitored incinerator, a Tail Gas Incident shall mean the combustion of Tail Gas in a combustion device other than a monitored incinerator where the amount of sulfur dioxide emissions in excess of 250 ppm on a twenty-four (24) hour period exceeds five hundred (500) pounds, calculated based upon best engineering judgment.

c. Reserved

(18) "Upstream Process Units" shall mean all amine contactors, amine scrubbers, and sour water strippers at the refinery, as well as all process units at the refinery that produce gaseous or aqueous waste streams that are processed at amine contactors, amine scrubbers, or sour water strippers.

(19) "Flaring Device" shall mean an Acid Gas Flaring Device and/or Hydrocarbon Flaring Device.

B. SRP NSPS Subparts A And J Applicability

221. Upon the Date of Entry, the SRPs at the Premcor Refineries shall be "affected facilities" pursuant to 40 C.F.R. Part 60, Subpart J, and shall comply with the applicable provisions of 40 C.F.R. Part 60, Subparts A and J, as such requirements apply to SRPs. For emission unit P025 at the Lima Refinery, Premcor shall certify compliance with the applicable provisions of 40 C.F.R. Part 60, Subpart J, to EPA and the applicable Plaintiff Intervenor by no later than April 1, 2008.

222. The SRPs at the Premcor Refineries are as follows:

Refinery	SRP	Claus Train	NSPS J Date
Memphis	Memphis SRP	Claus #1	Date of Entry
		Claus #2	Date of Entry
Lima	Lima SRP	Claus #1	Date of Entry
		Claus #2	Date of Entry
Port Arthur	Port Arthur SRP	543 100 Train	Date of Entry
		543 300 Train	Date of Entry
		544 500 Train	Date of Entry
		544 400 Train	Date of Entry
		545 100 Train	Date of Entry
		545 200 Train	Date of Entry
		546 600 Train	Date of Entry
		546 700 Train	Date of Entry

223. Reserved.

224. Upon the Date of Entry, all emission points (stacks) to the atmosphere for tail gas emissions from each of its SRPs will be monitored and reported upon in accordance with 40 C.F.R. §§ 60.7(c), 60.13, and 60.105. This requirement is not applicable to the AG Flaring Devices identified in Appendix K.

225. Nothing in this Addendum shall be interpreted to limit Premcor's opportunity to submit for EPA approval alternative monitoring procedures or requirements pursuant to 40 C.F.R., Part 60, Subpart A, for emissions from SRPs.

226. By no later than one (1) year after the Date of Entry, Premcor shall re-route any SRP sulfur pit emissions from the refineries subject to this Addendum such that all sulfur pit emissions to the atmosphere are either eliminated or included as part of the applicable SRP's emissions subject to NSPS Subpart J limit for SO_2, as a 12-hour rolling average, of 250 ppmvd SO_2, or 300 ppm reduced sulfur, each at 0% oxygen, as required by 40 C.F.R. § 60.104(a)(2).

227. During the life of this Addendum and for the purpose of determining compliance with the SRP emission limits, Premcor shall apply the "startup" and "shutdown" provisions set forth in NSPS Subpart A to the SRP but not to the independent startup or shutdown of its corresponding control device(s) (e.g., TGTU). However, the malfunction exemption set forth in NSPS Subpart A shall apply to both the SRP and its control device(s) (e.g., TGTU).

228. With respect to the Port Arthur Refinery, in order to further enhance operations of its SRPs, further reduce emissions of SO_2, further reduce AG Flaring Incidents and ensure compliance with 40 C.F.R. Part 60, Subparts A and J, Premcor shall implement the following actions at that refinery by the dates listed below:

a. Construct Additional Claus Trains – 546-600 and 546-700 by Date of Entry.

b. Revamp the GFU 241 and 242 Rich Amine Flash drum to include oil skimming facilities and skim oil pumps by December 31, 2009.

c. Install a rich amine flash drum at GFU 243 by December 31, 2009.

d. - g. Reserved.

229. Good Operation and Maintenance. Within one year of the Date of Lodging, Premcor shall submit to EPA and the appropriate Plaintiff-Intervener, a summary of plans for the Premcor Refineries to implement enhanced maintenance and operation of their SRPs, any supplemental control

devices, and the appropriate Upstream Process Units that have been or will be implemented. These plans shall be termed Preventive Maintenance and Operation Plans ("PMO Plans"). Each PMO Plan shall be a compilation of Premcor approaches for exercising good air pollution control practices and for minimizing SO_2 emissions at its Refinery(ies). The PMO Plan shall provide for continuous operation of its SRPs between scheduled maintenance turnarounds with minimization of emissions, including the continued use of supplemental control devices (e.g., amine/caustic scrubbers). The PMO Plan shall include, but not be limited to, sulfur shedding procedures, startup and shutdown procedures, hot standby procedures, emergency procedures and schedules to coordinate maintenance turnarounds of the SRP Claus trains and any supplemental control devices with scheduled turnarounds of major Upstream Process Units. The PMO Plan shall have as a goal the elimination of Acid Gas Flaring. Premcor shall comply with the PMO Plan at all times, including periods of Startup, Shutdown and Malfunction of its SRPs. If Premcor makes changes to a PMO Plan related to minimizing Acid Gas Flaring and/or SO_2 emissions, such changes shall be summarized and reported to EPA and the appropriate Plaintiff-Intervener on an annual basis.

229A. In addition, Premcor shall, along with each PMO described above, provide a brief description of the causes of Acid Gas Flaring at each refinery for each Acid Gas Flaring Incident that occurred from January 1, 2002 through December 31, 2006:

i. The date and time that the AG Flaring Incident started and ended (if available or reasonably determinable);

ii. An estimate of the quantity of sulfur dioxide emitted and the calculations used to determine that quantity (if available or reasonably determinable); and

iii. A description of the Root Cause and corrective actions, if any, that were taken and/or should be incorporated into the PMO to reduce the likelihood of a recurrence of such AG Flaring Incident (if reasonably available but only to the extent such Refinery was then owned by Premcor).

230. EPA and the appropriate Plaintiff-Intervener do not, by their review of a PMO Plan and/or by their failure to comment on a PMO Plan, warrant or aver in any manner that any of the actions that Premcor may take pursuant to such PMO Plan will result in compliance with the provisions of the Clean Air Act or any other applicable federal, state, or local law or regulation. Notwithstanding EPA's or appropriate Plaintiff-Intervener's review of a PMO Plan, Premcor shall remain solely responsible for compliance with the Clean Air Act and such other laws and regulations.

C. Flaring Devices - NSPS Applicability

231. In accordance with the schedule in this Section XII.C, Premcor accepts NSPS Subpart J applicability for each Flaring Device at the Premcor Refineries, as currently identified in Appendix N.

232. – 233. Reserved.

234. Good Air Pollution Control Practices. On and after the Date of Entry, Premcor shall at all times and to the extent practicable, including during periods of Startup, Shutdown, and/or Malfunction, implement good air pollution control practices for minimizing emissions consistent with 40 C.F.R. § 60.11(d).

235. For each Flaring Device, Premcor will elect to use one or any combination of the following NSPS Subpart J compliance methods:

a. Operate and maintain a flare gas recovery system to control continuous or routine combustion in the Flaring Device. Use of a flare gas recovery system on a flare obviates the need to continuously monitor and maintain records of hydrogen sulfide in the gas as otherwise required by 40 C.F.R. §§ 60.105(a)(4) and 60.7;

b. Operate the Flaring Device as a fuel gas combustion device and comply with NSPS monitoring requirements by use of a CEMS pursuant to 40 C.F.R. § 60.105(a)(4) or with a predictive monitoring system approved by EPA as an alternative monitoring system pursuant to 40 C.F.R. § 60.13(i);

c. Eliminate the routes of continuous or intermittent, routinely-generated fuel gases to a Flaring Device and operate the Flaring Device such that it receives only process upset gases, fuel gas released as a result of relief valve leakage or gases released due to other emergency malfunctions; or

d. Eliminate to the extent practicable routes of continuous or intermittent, routinely-generated fuel gases to a Flaring Device and monitor the Flaring Device by use of a CEMS and a flow meter; provided however, that this compliance method may not be used unless Premcor : (i) demonstrates to EPA that the Flaring Device in question emits less than 500 pounds per day of SO_2 under normal conditions; (ii) secures EPA approval for use of this method as the selected compliance method; and (iii) uses this compliance method for five or fewer of the Flaring Devices listed in Appendix N.

236. For the compliance method described in Paragraph 235(b), to the extent that Premcor seeks to use an alternative monitoring method at a particular Flaring Device to demonstrate compliance with the limits at 40 C.F.R. § 60.104(a)(1), Premcor may begin to use the method immediately upon submitting the application for approval to use the method, provided that the alternative method for which approval is being sought is the same as or is substantially similar to the method identified as the "Alternative Monitoring Plan for NSPS Subpart J Refinery Fuel Gas" attached hereto as Appendix D.

237. Compliance Plan for Flaring Devices. For each Covered Refinery, Premcor will submit a Compliance Plan for Flaring Devices to EPA and the applicable Plaintiff-Intervener by no later than December 31, 2009.

238. In each Refinery's Compliance Plan for Flaring Devices, Premcor will:

a. Certify compliance with one or more of the four compliance methods set forth in Paragraph 235 and accept NSPS applicability for at least (i) 50% of the system-wide Flaring Devices identified in Appendix N, (ii) one Flaring Device per

Refinery where such Refinery has three or more Flaring Devices, and (iii) at the Lima Refinery the FCC (North) flare which serves the coker unit, provided, however, that if the selected compliance method is a flare gas recovery system, as identified in Paragraph 235(a), then Premcor may certify that compliance will be achieved by no later than December 31, 2010;

b. Identify the Paragraph 235 compliance method(s) used for each Flaring Device that Premcor identifies under Paragraph 237;

c. Describe the activities that Premcor has taken or anticipates taking, together with a schedule, to meet the objectives of Paragraph 237 at each Refinery; and

d. Describe the anticipated compliance method(s) and schedule that Premcor will undertake for the remaining Flaring Devices identified in Appendix N.

239. By no later than December 31, 2013, Premcor will certify compliance to EPA and the applicable Plaintiff-Intervener with one or more of the four compliance methods in Paragraph 235 and will accept NSPS applicability for all of the Flaring Devices in Appendix N.

240. Performance Tests. By no later than ninety (90) days after bringing a Flaring Device into compliance by using the methods in Paragraph 235(b) or (d), Premcor will conduct a flare performance test pursuant to 40 C.F.R. §§ 60.8 and 60.18, or an EPA-approved equivalent method unless such performance test has previously been performed. In lieu of conducting the velocity test required in 40 C.F.R. § 60.18, Premcor may submit velocity calculations that demonstrate that the Flaring Device meets the performance specification required by 40 C.F.R. § 60.18.

241. The combustion in a Flaring Device of process upset gases or fuel gas that is released to the Flaring Device as a result of relief valve leakage or other emergency malfunctions is exempt from the requirement to comply with 40 C.F.R. § 60.104(a)(1).